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ABSTRACT

This symposium paper looks at three paradigms for naturalistic research on visuals: the positivistic, the interpretive, and the critical approaches. Discussion centers on questions of epistemology, such as "What do you mean?" and "How do you know?" The place of naturalistic inquiry within this discussion is indicated, and differences between paradigms are identified. For the positivistic and interpretive paradigms, the description covers their ontology (nature of reality), subject-object relationship, purpose of inquiry (generalization), explanation-causality, and axiology (the role of values in inquiry). The viewpoints described for the positivistic paradigm hold for the critical paradigm. Elements of Freire's theory of knowledge are discussed that are also identified as the basic elements that ground the interpretive and critical approaches to social and educational research: world-views, subjectivism, abstraction, codification, decodification, distancing, agency, problem-posing, learning, holistic viewpoint, and the social dimension. Sixteen references are listed. (LMM)

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Research and Theory Division Symposium:

Naturalistic Methodologies for
Deriving Individual Meanings from Visuals

FOUNDATIONS OF NATURALISTIC INQUIRY: DEVELOPING A THEORY BASE FOR UNDERSTANDING INDIVIDUAL INTERPRETATIONS OF REALITY

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Foundations of Naturalistic Inquiry:
Developing A Theory Base for Understanding
Individual Interpretations of Reality

This symposium is concerned with naturalistic methodologies in research on visuals. The purpose of my paper is to focus on the foundations of naturalistic inquiry. Foundation, in this sense, is concerned with explicating the theory base of naturalistic inquiry.

I will focus on the foundations of naturalistic inquiry by looking at 3 paradigms for research. My discussion will center on questions of epistemology (What do you mean? How do you know?). I will indicate the place of naturalistic inquiry within the above discussion and identify differences between paradigms. Finally I will suggest elements of a research methodology that exemplifies an interpretive and critical methodology.

When we do research, we try to gain a clear or clearer perception of reality. This clearer perception of reality can be of benefit to us depending on our interests, what we are searching for (truth? knowledge? Information? Understanding? Explanation? Emancipation?). This in turn has a bearing on what we define as the research "problem/situation" under investigation.

There are certain research paradigms that have emerged over the last few years. Bredo and Feinberg (1982) identify differing paradigms according to the research methodologies utilized. These methodologies have inherent interests in the kinds of research findings generated.(1) I find their identification of three research paradigms useful for determining what I consider to be the foundations of naturalistic inquiry.

Bredo and Feinberg identify the positivistic approach, the interpretive approach, and the critical approach to social and educational research. Returning to my earlier comment regarding research and gaining a clear/clearer perception of reality, our interests in doing research are varied. For example, we may try to better control reality, in order to make predictions, develop law-like theories/

explanations, establish causal relationships, etc. This would correspond to the positivistic approach to research.

We may want to better understand reality, and hence ourselves and others within a given context, meanings attached to social customs, etc. This would correspond to the interpretive approach.

We may want to better understand reality, and hence ourselves and others within a given context in order to act within that context, to effect change. This corresponds to the critical approach to social and educational research.

Fundamental differences separate the positivistic approach from the interpretive and critical approaches. The differences are of a philosophical nature, concerned with the nature of reality (ontology), the relationship of subject-object, the purpose of inquiry (generalization), the nature of knowledge the means of data collection/analysis (epistemology), the relationship of individuals to society, and the role of values in inquiry (axiology).

Using Guba (1982, 1983), and Bredo and Feinberg (1982), I would like to highlight some of the major differences between the positivistic approach, and the interpretive and critical approaches. The differences I want to discuss are concerned with ontology, subject-object dualism, generalization, causality, and axiology.

There is a danger here in oversimplifying the positivistic, interpretive and critical approaches. Guba (1983) points out that there is no "real or ultimate or absolute statement that could be made" for each of these approaches. As he states, "All statements are constructions; the issue here is whether my construction is fair" (p. 6).

The Positivistic Paradigm

ONTOLOGY (nature of reality). For the positivist researcher, reality is a "given". It exists "out there", and can be divided into dependent and independent variables. These can be studied independently of each other. "Inquiry can converge onto that reality until, finally, it can be predicted and controlled" (Guba, 1982,

1983). In other words, the world is seen as given, single, tangible, fragmentable, convergent.

SUBJECT-OBJECT RELATIONSHIP. The researcher maintains a distance between self and the object under investigation, "neither disturbing it or being disturbed by it" (Guba, 1982, 1983).

PURPOSE OF INQUIRY (Generalization). The purpose of inquiry is to develop a "nomothetic body of knowledge." This knowledge is best stated in law-like (nomological) generalizations which are seen as truth statements outside of time and specific context (hence they are true for all circumstances and times-cf. Guba, 1983, p. 7).

EXPLANATION-CAUSALITY. As Guba (1983) states: "Every action can be explained as the result (effect) of a cause that precedes the effect temporally (or is simultaneous with it" (p. 7).

AXIOLOGY (The role of values in inquiry). Inquiry is value neutral. This is ensured by the nature of the methodology used - "the facts speak for themselves" (Guba, 1983, p. 7).

The Interpretive Paradigm

I will use the same areas I briefly indicated in the previous section in characterizing basic viewpoints of the positivistic paradigm to identify the interpretive paradigm. The viewpoints I describe below also hold for the critical paradigm. The viewpoints discussed stand in oppostion to each other. Naturalistic inquiry falls within the interpretive and critical paradigms, so I am getting closer to identifying the theoretical underpinnings of naturalistic inquiry.

ONTOLOGY - The world is made up of tangible and "intangible", multi-faceted realities. These are best studied as a unified whole.(2) Investigation into each of the multiple realities will bring about divergence (suggesting further questioning). Understanding can be achieved, but "prediction and control" are not our intent (cf. Guba, 1983, p. 9).

SUBJECT-OBJECT RELATIONSHIP. The inquirer and the object of study interact to influence one another (especially when the object is another human's perceptions - cf. Guba, 1982, 1983).

PURPOSE OF INQUIRY (Generalization). The aim of inquiry is to develop an "ideographic" body of knowledge. We can then develop a series of working hypotheses that exemplify the "individual case" (cf. Guba, 1983, p. 9).

EXPLANATION (Causality). Guba (1983) states that

> An action may be explainable in terms of multiple interacting factors, events, and processes that shape it and are part of it; this interaction manifests itself as mutual and simultaneous shaping; inquirers can, at best, establish plausible inferences about the pattern of such shaping in a given case (p. 9).

AXIOLOGY (The role of values in inquiry). Inquiry is value-laden. Inquiry is influenced by the researcher's values as shown in the "choice of the problem and in the framing, bounding, and focussing of that problem." Inquiry is influenced by the research paradigm the researcher choses. The paradigm "guides the investigation into the paradigm." Inquiry is influenced by specific methodologies within the research paradigm. The methodologies "guide the investigation into the problem." Finally, "inquiry is influenced by the values that inhere in the context: social and cultural norms" (cf. Guba, 1983, p. 10).

The following schematic representation (fig. 1) is offered to help clarify the previous discussion. It is based on Guba (1982, 1983), Culbertson (1981), Bredo and Feinberg (1982), Habermas (1971), and my own efforts at putting this information into some systematic order.

Figure 1

It is important to acknowledge the differences between the paradigms. They are based on differing world-views. All three paradigms are needed to better understand/to gain a clearer perception of our world and our place within that world. Although I do not want to overly emphasize these differences, they do

Figure 1

Research Paradigms

Research Paradigm	Interests	Ontology (Nature of Reality)	Subject-Object Relationship	Purpose: Generalization	Explanation: Causality	Axiology: the role of values
Positivistic	To explain To control To predict	Given, single, tangible, fragmentable, convergent	Independent, neutral, value-free	Context and time free generalizations; Law-like statement (nomothetic); deductive quantitative focus on similarities	Real causes, temporally precedent/ simultaneous	Value - free
Interpretive	To understand, to interpret, (mutual/shared understanding)	Constructed, multiple, wholistic, divergent.	Inter-related, relationship influenced by subjective factors	Context and time bound working hypotheses; ideographic statements; inductive; qualitative; focus on differences	Interactive shapers (feedback and feed forward)	Value-bound; values influence selection of problem, theory, method and analysis
Critical	Emancipation to critique and to identify potential for change	Constructed, multiple, wholistic, divergent	Inter-related, relationship influenced by strong commitment to human emancipation	Same as for interpretive		Value-bound; Critique of ideology

exist. For this reason, it is difficult to interpret findings from a study within the interpretive paradigm, using naturalistic methods, in light of findings from within the positivist paradigm, using quanitative methods.

Inquiry within the three paradigms is conducted in differing manners. The results aimed for are different. I point out the differences not to set up a "straw man" for the purpose of justifying a "not so new" approach, but to identify the need to be clear on what it is we want to investigate.

The differing world-views that are the bases for the three research paradigms need to be examined closely by researchers. The world-views define a certain orientation toward the world. They provide ways of seeing the world, and events and people within that world.

In conducting research within the context of education, the process of schooling is also viewed differently within the framework of the three paradigms. Whether we look at schooling, learning, learners, outcomes of education, curriculum, etc., each of these have a special meaning for researchers. For example, if I were to talk about the learner (subject) within the interpretive approach, I would define the situation as follows:

> As individuals begin to interpret reality about them, processes of self-reflection/introspection and communication (externalization) of internal processes need to be considered by the researcher. Each individual learner is seen as a "meaning-maker", i.e., creator of their own reality. At the same time, the individual interpretations of reality are open to critique. This leads to the notion of critical thinking as it applies to an individual's interpretation of their context. To gain an <u>understanding</u> (interpretive approach) of an individual's perception of reality (context) through the utilization of visuals, the researcher must enter into a dialogic relationship with that individual.

Entering into a dialogic relationship with an individual can be most effectively achieved through naturalistic research, within the interpretive approach. Dialogue is the "encounter between men mediated by the world, in order to name the world" (Freire, 1970, p. 76). There are certain conditions required of subjects who enter into dialogue:

1. a profound love of men

2. humility
3. an intense faith in man (this is an a priori faith in the person)
4. trust (established through dialogue)
5. hope (rooted in the person's incompleteness, and recognition of that incompleteness; constant search)
6. critical thinking (Freire, 1970, pp. 78-82).

These requirements demand total commitment to the process of dialogue from those who choose to enter the dialogic relationship. They are neither naive nor unworkable. They become, for subjects engaged in emancipatory praxis, a basic orientation to life.

The term critical thinking, as a necessary element in dialogue, needs to be pursued and delineated further. Critical thinking is thinking which

> discerns an indivisible solidarity between the world and men and admits of no dichotomy between them -- thinking which perceives reality as process, as transformation, rather than as static entity -- thinking which does not separate itself from action, but constantly immerses itself in temporality without fear of the risks involved. Critical thinking contrasts with naive thinking, which sees 'historical time as a weight, a stratification of the acquisitions and experiences of the past,' from which the present should emerge normalized and 'well-behaved.' For the naive thinker, the important thing is accomodation to this normalized 'today.' For the critic, the important thing is the continuing transformation of reality, in behalf of the continuing humanization of men (Freire, 1970, p. 81).

Dialogue requires critical thinking and is capable of generating critical thinking. Communication is based on dialogue, and education is based on communication. Communication is concerned with meaning, understanding. Relating understanding to critical thinking and interpretation roots emancipatory education witnin the critical approach. In the critical approach, the paradigm for knowledge is no longer the "observation" but the "dialogue" (Habermas, 1973, p. 11).

I recommend that researchers interested in research using the interpretive and/or critical paradigms become grounded in the work of Paulo Freire (1970, 1973). Freire worked with the peasant population of Brazil. His concern was centered on adult literacy education and his works are a powerful example of using visuals

within an educational/learning situation. His work also exemplifies the differing world-view offered by an interpretive approach to research and its impact on the subjects within the literacy project.(3)

I offer the following ten points as elements of Freire's theory of knowledge (epistemology) which, I believe, are also the basic elements that ground the interpretive and critical approaches to social and educational research. These ten points can provide guidelines for developing research endeavors using visuals within the interpretive and critical paradigms.

1. World-view - Freire adheres to a world-view that identifies the subject in relation to a particular context ("I am myself and my circumstance");
2. Subjectivism - Acknowledging a world of nature independent of individuals does not negate individual experience of that world and the creation of a social/cultural/human world which itself is a reality (cf. Matthews, 1980, p. 89);
3. Abstraction - The individual mind plays an important part in acquiring knowledge. The world (context) "as it is conveyed and verbalized in people's knowledge, is a world composed of abstractions and is demacrated by concepts . . . People never just see, just experience, just discover; they always see and discover particular things, depending on what is already in their heads" (Matthews, 1980, p. 90);
4. Codification - Consists of re-presenting the "object of reflection" to the subjects in a form identifiable to them, and related to their experience. For example, Freire used photographs and drawings depicting the existential situations of the people with whom he worked. The visuals used were familiar to his subjects because they contained situations and events based on the subjects' own descriptions of their life-situations. These "codified" visuals become the objects that mediate the subjects in their critical analysis. The codifications become "cognizable objects, challenges towards which the critical reflection of

the decoders should be directed" (Freire, 1970, p. 107). The cognizable objects (visual re-presentations of the subjects in life-situations), posed as problems to the subjects, depict the situationality of the subjects. Self-reflection upon this situationality is reflection about the very "condition" of existence, namely, "critical thinking by means of which men discover each other to be 'in a situation'" (Freire, 1970, p. 100). When this situation (context) is seen as an "objective-problematic situation," subjects reach the stage wherein the ability to intervene in their self-formative, historical context becomes a possibility.

> Intervention in reality -- historical awareness itself -- thus represents a step forward from emergence, and results from the conscientizacao of the situation. Conscientizacao is the deepening of the attitude of awareness characteristic of all emergence (Freire, 1970, pp. 100-101).(4)

5. Decodification - Consists of teacher-student, students-teachers reflecting critically (dialogics) on the mediating objects (e.g. visuals) thus externalizing their "thematics" and consequently making "explicit" their "real consciousness" of the world (Freire, 1970, p. 108). During this time, through dialogue, interpretations are challenged and understandings questioned, constantly posing the object of discussion as problematic. Through this process, which Freire refers to as "conscientization," subjects can arrive at a greater awareness of the social context which forms their lives, and also create awareness of their capacity to intervene and transform it (cf. Freire, 1970, pp. 100-118).

The process of decoding the mediating objects under analysis thus consists in investigation of the subjects' thinking concerning their life-situation. Thematic investigation, which deepens historical awareness, becomes educational. At the same time "all authentic education investigates thinking" (Freire, 1970, p. 101). Investigating the subjects' thinking leads to further investigation, hence education and thematic investigation are "simply different moments of the same process" (Freire, 1970, p. 101).

When subjects begin to make explicit their views of the world, they begin to see how "they themselves acted while actually experiencing the situation they are now analyzing, and thus reach a 'perception of their previous perception'" (Freire, 1970, p. 108). Achieving this awareness, reality is perceived differently: "By broadening the horizon of their perception, they discover more easily in their 'background awareness' the dialectical relations between the two dimensions of reality." Thus the process of decodification brings about new perceptions and the development of "new knowledge" (Freire, 1970, p. 108);

6. Distancing - Knowing demands that we gain some distance from the "knowable object" (existential situation). Individuals "need to stand back and reflect on their situation as an object of knowledge" (Matthews, 1980, p. 91);
7. Agency - Agency/activity is a prerequisite for knowledge. Knowing demands activity, and is an active process. "Knowing is the task of subjects, not of objects. It is a subject, and only as such, that a man or woman can really know" (Freire, 1973);
8. Problem-Posing Learning - This is done at the level of decodification. It means asking questions about the codified object, and "calling into question", challenging perceptions and interpretations. It is an unmasking of "social constraints" and, going a step further, questioning the reasons why those constraints exist.(5)
9. Holistic Viewpoint - For Freire, to know things (objects) is to know things in relation. "To know a part is to know how it connects with the whole. In the process of codification, different impressions of the same object or process are utilized so that interrelations might be recognized. It is the total vision which we call knowledge" (Matthews, 1980, p. 93);
10. The Social Dimension - "Just as there is no such thing as an isolated human being, there is also no such thing as isolated human thinking. In

the act of thinking about the object s/he cannot think without the co-participation of another subject" (Friere, 1973).

Conclusion

The differing world-views of the three paradigms is the point with which researchers will have to become more familiar. The dominant approach to research today, the positivistic approach, is ingrained in our ways of talking about schooling and research. We will need to learn a new language. We will have to learn to live with ambiguity. Certitude is not always possible. We will need to become comfortable with new ways of looking at reality and defining what is legitimate knowledge. We will have to concern ourselves with epistemology.

Perhaps we should concern ourselves less with creating "effective" visuals, or even trying to define elements of effective visuals, and focus our attention on developing critical thinking skills. Materials are readily available to us. Moving beyond the visual to the use of language in interpreting visuals offers great research potential regarding how individuals come to grips with their world. Arnold Wesker, in an insightful essay entitled Words As Definitions of Experience (London: Writers and Readers Publishing Cooperative, 1976) has already offered us an exciting possiblity for blending research on visuals and the use and power of language. The interpretive and critical paradigms for research should offer new directions and possiblities for future endeavors.

Footnotes

1. Also see Anthony Giddens. New Rules of Sociological Method: A Positive Critique of Interpretive Sociologies (New York: Basic Books, Inc., Publishers), 1976; Egon G. Guba and Yvonna S. Lincoln. Effective Evaluation (San Francisco: Jossey-Bass Publishers), 1982; Gail McCutcheon. "On the Interpretation of Classroom Observations", in The Educational Researcher, May, 1981; Richard J. Bernstein. The Restructurring of Social and Political Theory. (Pennsylvania: University of Press), 1978; Egon G. Guba. The Context of Emergent Paradigm Research. Paper presented at A Career Development Seminar, Center for Public Affairs and the School of Education, University of Kansas and The University Council for Educational Administration, Overland Park, Kansas, November 4-5, 1983; and Egon G. Guba and Yvonna S. Lincoln. Epistemological and Methodological Bases of Naturalistic Inquiry. ECTJ, Vol. 30, No. 4, Winter, 1982.

2. C. Wright Mills, in The Sociological Imagination (New York: The Grove Press, Inc., 1961), strongly states the case for empirical investigation and the need for examining the part in relation to the whole:

> The specific methods--as distinct from the philosophy--of empiricism are clearly suitable and convenient for work on many problems, and I do not see how anyone could reasonably object to such use of them. We can of course, by suitable abstraction, be exact about anything. Nothing is inherently immune to measurement. If the problems upon which one is at work are readily amenable to statistical procedures, one should always try to use them. If, for example, in working out a theory of elites, we need to know the social origins of a group of generals, naturally we try to find out the proportions coming from various social strata. If we need to know the extent to which the real income of white-collar people has gone up or down since 1900, we run a time-series of income by occupation, controlled in terms of some price index. No one, however, need accept such procedures,

when generalized, as the only procedure available. Certainly no one need accept this model as a total canon. It is not the only empirical manner.

We should choose particular and minute features for intensive and exact study in accordance with our less exact view of the whole, and in order to solve problems having to do with structural wholes. It is a choice made according to the requirements of our problems, not a 'necessity' that follows from an epistomological dogma.

I do not suppose that anyone has a right to object to detailed studies of minor problems. The narrowed focus they require might be part of an admirable quest for precision and certainty; it might also be part of a division of intellectual labor, or a specialization to which, again, no one ought to object. But surely we are entitled to ask: If it is claimed that these studies are parts of some division of labor which as a whole constitutes the social science endeavor, where are the other divisions of which these studies are parts? And where is the 'division' wherein just such studies as these are put into some larger picture? (pp. 73-74).

3. I have outlined Freire's view of education and the implications his views have for the field of instructional technology.(Koetting, 1981).

4. Freire's Educational for Critical Consciousness (New York: The Seabury Press), 1973 gives examples of visuals used in the codification process. For a detailed discussion of the codification/decodification process, see Freire's Pedagogy of the Oppressed (New York: The Seabury Press, 1970), Chapter 3.

5. Denis Goulet, in his introduction to Freire's Education for Critical Consciousness, op. cit., draws the distinction between Freire's notion of problem-posing-education (wherein the natural, cultural and historical reality in which the subject is immersed is seen as "problematic") and the "problem-solving" view of education, wherein

An expert takes some distance from reality, analyzes it into component parts, devises means for resolving difficulties in the most efficient way, and then dictates a strategy or policy. Such problem-solving, according to Freire, distorts the totality of human experience by reducing it to those dimensions which are amenable to treatment as mere difficulties to be solved. But to 'problematize' in his sense is to associate an entire populace to the task of codifying total reality into symbols which can generate critical consciousness and empower them to alter their relations with nature and social forces (p. IX).

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